

CLAIMS

1. An image forming apparatus, provided with a paper feed cassette and an image forming portion, that takes out a recording medium stored in this paper feed cassette sheet by sheet in response to an image forming request and performs image forming in the image forming portion, the image forming apparatus comprising:

a push-out means that can push out the paper feed cassette from an installed state toward an uninstalled state relative to the main body of the apparatus;

a warning means that can emit a warning that there is insufficient paper to a user who requested image forming;

a sheet quantity confirming means that can confirm the number of sheets of the recording medium stored in the paper feed cassette; and

a control means that causes the sheet quantity confirming means to confirm the number of sheets of the recording medium stored in the paper feed cassette when an image forming request has been received, and if the number of sheets of the recording medium stored in the paper feed cassette is lower than the number of sheets requested by the image forming request, the control means causes the paper feed cassette to be pushed out from an installed state toward an uninstalled state by the push-out means without executing the image forming operation, and causes the user to be warned by the warning means that the number of sheets of the recording medium is insufficient.

2. The image forming apparatus according to claim 1, wherein when an image forming request has been received from a terminal machine through a network, the control means lets the sheet quantity confirming means confirm the number of sheets of the recording medium stored in the paper feed cassette, and if the number of sheets of the recording medium

stored in the paper feed cassette is lower than the number of sheets requested by the image forming request, the control means causes the paper feed cassette to be pushed out from an installed state toward an uninstalled state by the push-out means without executing the image forming operation,
5 and causes the user to be warned by the warning means that the number of sheets of the recording medium is insufficient.

3. The image forming apparatus according to claim 1 or claim 2, further comprising a paper storage board supports a recording medium and
10 moves to a lower position as the number of stored sheets of the recording medium increases;

wherein the sheet quantity confirming means confirms the number of sheets of the recording medium stored in the paper feed cassette by detecting the height position of the paper storage board with a reflective
15 optical sensor.

4. The image forming apparatus according to claim 1 or claim 2, wherein the paper feed cassette comprises:

a matching portion made of metal that extends in the vertical
20 direction along the edge of the stored recording medium and matches the recording medium; and

a paper storage board made of metal that is movable along this matching portion in the vertical direction while contacting this matching portion and that moves to a lower position as the number of stored sheets of
25 the recording medium increases;

wherein the sheet quantity confirming means lets a current flow from the paper storage board to the matching portion, and confirms the number of sheets of the recording medium stored in the paper feed cassette based on the electrical resistance from the paper storage board to the
30 matching portion, which changes according to the height position of the

paper storage board.

5. The image forming apparatus according to any of claims 1 through 4, wherein the push-out means comprises:

5 an engaging mechanism that can switch between an engaged state and a released state of the paper feed cassette relative to the main body of the apparatus; and

a biasing portion that confers a biasing force on the paper feed cassette in the push-out direction; and wherein

10 when the number of sheets of the recording medium stored in the paper feed cassette is lower than the requested number of image forming sheets, the engaging mechanism puts the paper feed cassette in a released state relative to the main body of the apparatus.

15 6. The image forming apparatus according to any of claims 1 through 5, wherein the control means, immediately after an image forming request has been received, causes the sheet quantity confirming means to confirm the number of sheets of the recording medium stored in the paper feed cassette, and if the number of sheets of the recording medium stored in the paper
20 feed cassette is lower than the number of sheets requested by the image forming request, the control means causes the paper feed cassette to be pushed out from an installed state toward an uninstalled state by the push-out means without executing the image forming operation, and causes the user to be warned by the warning means that the number of sheets of
25 the recording medium is insufficient.